

REMARKS

Claims 1, 2, 4-10, 12-18 and 20-24 are pending. Independent claims 1, 9 and 17 have each been amended as described below. As a result of such amendments, claims 33-35 have been canceled and the dependencies of claims 4, 5, 12, 13, 20 and 21 have been amended. Reconsideration is respectfully requested.

Each of the independent claims 1, 9 and 17 has been rejected under 35 U.S.C. § 102(b) based on U.S. patent 6,052,489 to *Sakaue*. Dependent claims 4, 5, 8, 12, 13, 16, 20, 21, 24 and 33-35 also stand rejected under § 102(b) based on *Sakaue*. Dependent claims 2, 6, 7, 10, 14, 15, 18, 22 and 23 have been rejected under 35 U.S.C. § 103(a) based on *Sakaue* in view of *McCann* (previously of record).

Each of the independent claims has been amended to recite that the tracing of a group of pixels, including an initial boundary-identified pixel, that constitute a local boundary segment comprises searching for and identifying each new pixel in the group with respect to a background pixel near the initial boundary-identified pixel, wherein orientation and order of the searching is with respect to the background pixel during the entire tracing operation. Associating the directional order of the search with the background neighbor pixel allows the use of locally relative directions, which can be important in a situation in which the number of directions to be searched at each juncture of the trace is constrained to less than 7. See applicants' specification, e.g., p. 12, lines 23-25.

Sakaue does not disclose nor teach a tracing step with such a feature. In *Sakaue*, a window of $M \times M$ pixels whose center is a notice pixel is shifted, resulting in bit map signals being sent to a contour extraction section, which extracts contour pixels neighboring the notice pixel. The coordinates of the contour pixels are sent to a smoothing signal generation section, which estimates an outline from the coordinates of the contour pixels and generates the smoothing signal of the notice pixel from the outline. Nowhere does *Sakaue* even suggest a tracing step as claimed by applicants. *Sakaue's* extraction process does not involve searching for and identifying each new pixel in the group with

respect to a background pixel near the initial boundary-identified pixel, wherein orientation and order of the searching is with respect to the background pixel during the entire tracing operation.

Accordingly, it is respectfully submitted that each of the independent claims is patentable over *Sakaue*. Moreover, applicants maintain that *McCann*, which has been applied in combination with *Sakaue* in connection with certain dependent claims, does not offset the deficiencies of *Sakaue*. It is further submitted that each of the remaining dependent claims is patentable for at least the same reasons as its corresponding independent claim.

In view of the foregoing, applicants respectfully request favorable reconsideration.

Respectfully Submitted,



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Date: October 14, 2004